



# Creating incentives for farmers to use organic seed

Bottlenecks and success factors  
in 4 pilot case studies



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# Introduction

Seeds are the foundation of farming. Organic farming should ideally be based on the use of organically produced seed. Indeed, according to the European organic regulation (EC No 834/2007), the use of organic seed in organic farming is mandatory whenever available, with derogations for the use of non-organic seed being granted in cases whenever there is insufficient availability of organic seed. In the new organic regulation (EC No 2018/848), it is foreseen that these derogations should be phased out by December 31st 2035. The reality is that in practice, a larger share of non-organic seed is used in organic farming.



## Factors influencing the use of organic seed in Europe

Organic seed use is influenced by various factors, some of which were explored by the LIVESEED project. First of all, there is a geographical influence, with farms in Northern and Central Europe using a significantly higher proportion of organic seed than those in Southern and Eastern Europe (Orsini et al 2019); alongside this geographical trend, farms' orientation is another relevant factor, with fruit-producing farms using a significantly lower share of organic planting material than vegetable, arable and forage farms; marketing channels play also a role, with farmers who sell their crops directly to consumers or to organic shops using significantly higher rates of organic seed than those who use other channels; finally, a size factor is also at play, with small farms being more

likely to use organic seed than large farms.

The reduced choice of varieties and the higher price compared to conventional seed work as disincentives for farmers to use organic seed. A survey among farmers conducted by LIVESEED shows that those farmers who use organic seed do not consider seed quality to be a major issue: the few complaints that were expressed, related to germination issues (15% of respondents) and pest and disease susceptibility (10%) (Orsini et al. 2019).

According to a survey among seed companies undertaken in 2014 as part of the COBRA project, the growth of the organic seed sector in Europe is hampered by an easily granted derogation policy (Rey et al 2016). On the contrary, stricter national rules which reduce the ease with which derogations are granted can increase the market security for organic seed producers and thus enhance both supply and demand of organic seed. The results from the database analysis (Solfanelli et al

2019) and the survey among farmers (Orsini et al 2019) undertaken in LIVESEED substantiate the expectation that in countries with a stricter derogation policy, there is greater availability and use of organic seed. However, it must be acknowledged that those countries also have a properly functioning database and a well-developed seed sector. Without these prerequisites in place, strict derogation rules may only result in higher administrative burdens for farmers (Raaijmakers and Schäfer 2019). Therefore, creating non regulatory incentives for farmers to use organic seed remains necessary.

## Incentives

The main incentive for farmers is having organic seed available for the varieties they need (Orsini et al. 2019). The national visits and the survey among farmers carried out as part of the LIVESEED project, found that the motivation to use organic seed increases if the varieties are better adapted to (local) organic growing conditions (Orsini et al 2019). Therefore, the aim to reach

100% organic seed use cannot be separated from investments in organic breeding and organic variety trials (Raaijmakers and Schäfer 2019).

Additional factors influencing farmers' commitment to use organic seed are the fact that they find it important for the integrity of organic production or for meeting consumers' expectations. Farmers can also be motivated to use organic seed if they receive a discount on the price or if there is a clear demand from traders, retailers and wholesalers in addition to consumers. Certifiers and other farmers can also play a role in encouraging the use of organic seed, giving advice on what is available in the database and is most suitable for the area.

Incentives for farmers have been experimented within different countries, to accelerate growth in their use of organic seed. Often this is done on a small scale in a specific supply chain with a limited set of crops. This booklet presents some experiences of implementing such incentives in different EU countries.



### References:

Orsini et al. 2019 "D4.1 Report on relative importance of factors encouraging or discouraging farmers to use organic seed in organic supply chains" available on [www.liveseed.eu](http://www.liveseed.eu)

Rey 2016 "Organic seeds and plant breeding from the seed companies' perspective" in *Breeding for diversity – political implications and new pathways for the future*. Available at [https://orgprints.org/31147/1/Cobra\\_net.pdf](https://orgprints.org/31147/1/Cobra_net.pdf)

Schaefer and Raaijmakers 2019 "D1.9 Report on Political Obstacles and Bottlenecks on the Implementation of the Rules for Organic Seed in the Organic Regulation" available on [www.liveseed.eu](http://www.liveseed.eu)

Solfanelli et al 2019 "Comparative analysis of European organic seed databases" in: *The state of organic seed in Europe - LIVESEED booklet#2* available at: <https://www.liveseed.eu/tools-for-practitioners/booklets/>



**TABLE 1.** an overview of incentives for farmers to use organic seed

Type of incentive	Incentives to use organic seed	Methods to apply
Economic	Discount on the price of organic seed	<ul style="list-style-type: none"> <li>• Collective purchasing of the seed by traders or farmers' cooperatives</li> <li>• Specific agreements with the seed producer</li> </ul>
Economic	Premium price for products obtained from organic seed	<ul style="list-style-type: none"> <li>• Private agreement with the buyer of the product</li> <li>• Awareness raising</li> <li>• Communication towards consumers</li> </ul>
Economic	Leveling of the price difference between organic and conventional seed	<ul style="list-style-type: none"> <li>• Private agreement between farmers</li> <li>• Price difference used to fund organic seed production or breeding</li> </ul>
Economic	Pre-financing of organic seed	<ul style="list-style-type: none"> <li>• Collective purchasing of the seed by traders or farmers' cooperatives</li> </ul>
Economic	Traders, retailers or wholesalers demanding the use of organic seed	<ul style="list-style-type: none"> <li>• The buyer of the product supports the farmer in finding an adequate supply of organic seed</li> <li>• The buyer of the product provides the seed directly to the farmer</li> </ul>
Social/Economic	Leveling of the organic seed market's playing field	<ul style="list-style-type: none"> <li>• Private agreement between farmers to use organic seed</li> <li>• The percentage of organic seed used is raised gradually</li> </ul>
Economic/Technical	Farmers produce (and process) their own organic seed	<ul style="list-style-type: none"> <li>• Organic farmers are trained in seed production</li> <li>• Farmers' cooperatives buy a seed processing station</li> </ul>
Ecological	The cultivar is more suitable for organic farming	<ul style="list-style-type: none"> <li>• Organic breeding</li> <li>• Selection under organic conditions</li> <li>• Breeding for organic traits</li> </ul>
Ecological	The cultivar is adapted to local growing conditions	<ul style="list-style-type: none"> <li>• Local seed multiplication and selection by organic farmers</li> </ul>
Technical	Reduced risk of residues	<ul style="list-style-type: none"> <li>• Awareness raising</li> <li>• Communication towards farmers, traders and other stakeholders</li> </ul>
Social/Ethical	Greater integrity of the final organic product	<ul style="list-style-type: none"> <li>• Awareness raising</li> <li>• Communication towards farmers, traders and other stakeholders</li> </ul>
Social/Economic	The cultivar has an added value (taste, quality, health, local production) for consumers	<ul style="list-style-type: none"> <li>• Awareness raising and communication towards consumers</li> </ul>

## Booklet outline

In this booklet, we present four practical examples of pilots set up to incentivise the use of organic seed in four different countries. Despite their different backgrounds and contexts, they all have in common to be industry driven initiatives initiated by actors of the private sector. The main drivers behind these pilots fall under one or more of the following categories:

- Pre-financing organic seed through the value-chain (economic incentive)
- Access to a specific variety requested by the market (technical/economic incentive)
- Expanding the range of cultivars adapted to organic and local conditions (ecological incentive)
- Improving seed quality (technical incentive)

In order to identify the bottlenecks, success factors and impact of each pilot, interviews were carried out with key actors, following the same format in each country. For each pilot, the initiators and at least two farmers were interviewed. The interviews with the actors were always conducted by a national partner familiar with the local context and speaking the national language.

### Italy - Organic durum wheat

In the Italian pilot, two organic durum wheat and pasta producing cooperatives made a **deal with the organic seed producers** (table 1: Collective purchasing of the seed by trader or farmers' cooperative) in order to get organic seed from the desired varieties for a better price. The cooperatives **pre-finance the seed for the farmers** and take care of the processing and sale of the product for a good price. The main incentives for the farmers to use organic seed are that: (i) they receive a discount (5%) on the normal seed price; (ii) they do not have to search for it on the market, and; (iii) they do not have to pay for it in advance as the price of the seed is settled against the price of the harvested product. Another important incentive is the fact that they gain extra profit shares, because the cooperatives share among their consumers the value of using organic seed to obtain the final products (table 1: premium price for product made with organic seed).





## The Netherlands - Organic spinach seed

In the Dutch pilot the main incentive for the farmers to use organic spinach seed is that they get access to organic seed from the specific variety they need, for a fair price. This is realized through a cooperation among three stakeholders (farmers, seed producer, trader).

The spinach growers initiated the process by asking for organic seed. However, to start organic spinach seed production at scale for this particular variety, a sufficiently large collective seed purchase was needed. This was achieved through a **commercial agreement between organic vegetable trading company Green Organics and seed company Rijk Zwaan**. The resulting win-win agreement allowed the seed company to secure its organic spinach seed sales in advance and plan for production accordingly. **The extra cost of the organic spinach seed is distributed evenly among all organic spinach growers supplying Green Organics**, including those who use non-organic seed with a derogation. Furthermore, Green Organics pre-finances the seed for the farmers, however, this represents a common practice in contract farming and is not the main incentive behind the pilot.

## Hungary - Organic einkorn and emmer

In Hungary the pilot was initiated by ÖMKI, and consisted in offering organic farmers in marginal areas, organic seed from suitable einkorn and emmer cultivars with an added-value, both from an agronomic

and commercial point of view.

The pilot gives the farmers the **opportunity to test new cultivars** which are **normally not available** to them, such as robust cultivars better adapted to local conditions and potentially carrying an added value in the market, for example in terms of nutritional value of their end products (table 1: The cultivar is more suitable for organic farming & the cultivar has an added value for consumers).

The main value of this initiative lies in offering access to good quality seed of valuable cultivars, normally inaccessible and **promoting a process of knowledge sharing on production, processing and marketing of these new crops**.

## Romania - Organic field crops seed for large scale production

In the Romanian pilot, all the farmers that are members of the cooperative are both seed producers and users. The main incentive for the farmers to use organic certified seed grown, cleaned and processed within their cooperative is represented by the **excellent seed quality offered**. Other important points in favour of choosing organic seed are: absence of chemical residues (often found on non-organic seed) and **access to locally adapted cultivars** (table 1: Farmers produce and process their own organic seed & The cultivar is adapted to local growing conditions). Furthermore, a financial incentive mechanism is in place, in the form of a **discount on the price of organic seed produced within the cooperative** (compared to market prices), as well as a **premium price for the products deriving from organic seed**.





## 1. From seed to pasta: collaborative value chain to increase the use of organic durum wheat seed in Italy



### 1.1. Introduction

In Italy, durum wheat (*Triticum turgidum* ssp. *durum*) is the most widely cultivated organic cereal crop, with more than 132,000 ha in 2018, representing about 40% of all Italian organic cereal land and about 16% of the total Italian organic arable area (SINAB, 2019). According to recent LIVESEED's estimates, the potential annual seed demand in terms of volume of durum wheat seed required by Italian organic farmers is about 30,000 tonnes. However, there is currently insufficient quantity and diversity of organically produced seed from durum wheat cultivars, resulting in a high use of non-organic untreated seed by Italian organic farmers (about 40% of the total seed used in organic farming).

In general, cereal seed production is a significant sector in Italy. The organic cereal seed sector is also well developed, with several small-medium companies multiplying organic seed for the domestic market. While the upstream vertical integration with breeders is often strong and well established, the one downstream, with retailers and farmers' cooperatives is more critical due to a lack of collaborative approaches, information sharing along the supply chain and decision timing.

In addition to the organic certified seed market, there are several informal seed systems developed at local level in many Italian regions in which farmers and cooperatives produce and exchange seed, mainly from local and traditional varieties and often only within their network. However, compared to the total demand of organic durum wheat seed in Italy, the quantities of seed exchanged in informal systems are still relatively small.

In Italy, farmers also use an important share of farm-saved seed, especially in cereal production. For durum wheat, for instance, it is estimated that over 25% of the seed used is farm-saved.

Results from LIVESEED showed that the structure and functioning of the end-product supply chain can help different members of the organic seed value chain to match demand with supply. A successful example of collaborative approaches along the organic durum wheat seed supply chain was explored, through the case of two organic cooperatives who worked together with seed suppliers and breeders to increase the production and use of organic durum wheat seed among their associated farmers.

## 1.2. Initiators

The initiative described in this case study involves two organic cooperatives: the Montebello Cooperativa Agrobiologica and the Gino Girolomoni Cooperativa Agricola. Together, their members farm about 20,000 hectares of arable land, for a total production of 19,000 tons of durum wheat every year. The two cooperatives, representing different segments of the organic pasta supply chain, work together to implement common strategies for the development of the organic cereal supply chain in the Marche region. Their aim is to encourage networking and experience exchanges, as well as to support the development of initiatives encouraging farmers to use more organic seed. The motivation behind these initiatives is to contribute to the promotion of organic agriculture and provide high-quality organic seed to their value chains.

## 1.3. Incentives to use organic seed

One of the initiatives developed by the two cooperatives to increase the use of organic seed among their members is the pre-financing of seed. The pilot started about 10 years ago. The main crop involved is durum wheat, but the cooperatives have recently started working with some other arable crops such as soft wheat, barley, and sunflower. The functioning of the initiative can be summarized as follows. In the first two weeks of September, member farmers are contacted by the cooperatives' technicians and asked to declare how many hectares of each arable crop they intend to cultivate and supply to the cooperative, and to sign the relative contract. Farmers are then asked to make a written order of the organic seed they need for the crops included in the contracts. The cultivar list (usually about 3 to 4 cultivars of durum wheat) and the relative prices are previously determined by a written agreement between the cooperatives and the

seed suppliers. Once the cooperatives have collected all orders from farmers, seed suppliers are contacted for the final collective order. The wheat seed is then usually delivered by the cooperatives to the farmers at the end of October, just in time for the sowing season. Farmers pay the seed only when the cooperatives make the first "advance payment" for the grain received. Usually, the main product (durum wheat grain) is delivered in June/July and the first advance payment (about 70% of the full amount) is made in September. To access the pre-financing services, farmers must also sign a crop insurance contract, which allows the cooperative to mitigate the potential risk that some farmers may not deliver their product due to adverse climate conditions.

Besides the pre-financing of organic seed, the two cooperatives have also experimented with a breeding initiative in partnership with the non-profit plant breeding association Getreidezüchtung Peter Kunz (GZPK) and the biggest organic food retailer in Italy (Ecor Naturasi). Together, they set up an association called "Fondazione Seminare il Futuro" to develop new cultivars specifically adapted for organic conditions in different locations of Central Italy. The registration of the newly developed candidate cultivar of durum wheat started in 2019. The cultivar is currently tested under conventional Value for Cultivation and Use (VCU) trials, as there are no official VCU trials for organic cultivars in Italy. Once an organic variety is registered in the official national Catalogue, the idea is to collaborate with a seed company to multiply and distribute its seed to the cooperatives' associated farmers.

## 1.4. Farmers' point of view

In general, the interviews with farmers reveal a growing interest in the initiative and positive grounds for the development of similar collaborative approaches in the Italian organic sector. This is particularly true



for medium or large scale organic arable farms, where informal systems and farm-saved seed play a less important role. These farm types were used to buying their seed from local retailers, who usually have very little or no organic seed available at all.

***“The seed pre-financing initiative is important, but is not the only motivation that influences my decision to participate in the initiative. I buy the seed collectively from the cooperative because this allows me to save time in the selection process and to reduce the risk of failing to find organic seed on the market.”*** Montebello coop. farmer

The Girolomoni and Montebello cooperatives are widely recognized as two of the most influential actors in the development of the organic sector in Central Italy. From the farmers' perspective, the initiative constitutes an alternative governance approach to organic seed, which could lead to an improvement of the relationships and interdependence between organic farms and other value chain actors, including organic seed suppliers.

***“I participate in the initiative on a voluntary basis, as there are no specific obligations for members. However, I trust that the cultivars selected by the cooperative are those which best fit our needs and the quality requirements for organic pasta production.”*** Girolomoni coop. farmer

### 1.5. Results, bottlenecks and success factors

Thanks to the cooperatives' initiative, the amount of organic durum wheat seed use among members is currently about 50% of the total potential seed demand (440 tonnes of durum wheat seed), with a perspective of further growth in the near future. Before pre-financing started, organic certified seed use was below 15%. A number of positive

incentives underlie farmers' general willingness and interest in participating in the initiative:

- Pre-financing of seed allows farmers to pay the seed once the final grain is delivered, with advantages in terms of annual variable costs.
- Buying organic seed collectively through the cooperative allows saving about 5% to 7% compared to the seed price on the regular market.
- As the logistics of seed ordering and delivering are managed by the cooperative, farmers can save the time and resources which they usually dedicate to contacting seed retailers and asking for potential derogations in case the organic seed is not available.
- Last but not least, together with the seed offered, the two cooperatives provide farmers with guidance on which cultivars are most suited for their specific conditions.

Besides the presence of several success factors related to the development of the initiative, there are two main limiting factors that need to be considered. First of all, the list of available organic seed cultivars is limited to those for which the cooperative and the seed supplier made an agreement, which are only 3 to 4 cultivars for durum wheat and one cultivar for the other arable crops. According to the cooperatives' agronomist, the main critical issue reported by farmers located in mountain and marginal areas is the availability of organic seed for the cultivars they need. Secondly, all the logistics related to seed storage and delivery need to be carefully considered when the objectives are to reach 100% of organic seed among the producer members. The geographic dispersion of farmers across central Italy may also be an important limiting factor: the more dispersed the farmers, the greater will be the effort to implement common activities, with negative consequences on

the quality of both collaboration and aligned incentive systems between actors in the supply chain.

### 1.6. Recommendations

The innovation is based on the idea that a well-organised value chain can create a demand for high-quality organic seed. For this idea to come to life, a “win-win situation” needs to be developed all along the food chain, where everyone benefits: (i) a coordinated system of seed pre-ordering allows seed companies to plan ahead and thus avoid the problem of unsold organic seed; (ii) organic farmers benefit from an adequate seed choice at a relatively low price compared to the regular market; (iii) processors (millers and pasta makers) benefit from the fact that the raw product they use is produced from organic seed and

can therefore better promote their end product on the organic market. The governance mechanisms applied along the supply chain are of crucial importance for the initiative to be successful. Formal mechanisms, such as written agreements, bureaucratic controls, and production planning – generally used by agri-food cooperatives to legally define the relationships between parties – are essential instruments to coordinate the activities. However, one must be aware of other informal mechanisms and values which emerge from the social relationship between the actors operating in the supply chain. These unwritten norms, shared values, goals, relationships of trust and perception of reputations, have a strong influence on performance outcomes of initiatives such as the one reported in this study.





## 2. Organic spinach seed for the industry market in the Netherlands



### 2.1. Introduction

There are many producers of organic vegetable seed and seed potatoes in the Netherlands. Given its strong seed sector, the Netherlands was the first country to implement a National Annex in 2004, a list of species and sub-species for which sufficient organic seed is available and for which no derogations are granted. Although the National Annex has grown over the years, non-organic seed is still used for many crops. One of these crops is spinach.

Organic spinach is mainly produced for the industry market (frozen or canned spinach). Industry supply chains are usually very cost price oriented. As a consequence, little organic seed is generally used in industry supply chains, to avoid any increase in cost price. The seed company Rijk Zwaan's variety Boa is the main variety used in the Dutch industry spinach supply chain. Before this pilot was started, there was no organic Boa seed available. Organic spinach producers were hesitant to purchase organic seed because it would mean a **substantial increase in production costs**. This has to do with the fact that you need millions of seed to produce one hectare of organic spinach.

For Rijk Zwaan, the production of good quality organic spinach seed in large quantities for an acceptable price is a challenge. Another obstacle is the fact that, as long as there is only one producer of organic spinach seed, spinach will not be placed on the National Annex. Therefore farmers can still obtain a derogation for the use of cheaper conventional seed.

## 2.2. Initiators

The spinach pilot is a collaboration between the Dutch vegetable breeding company Rijk Zwaan and organic trading company Green Organics. Green Organics works with a fixed group of growers for which they also buy seed. Spinach for the industry market is a good candidate for Rijk Zwaan to expand their organic offer, but only on the condition of having a partner guaranteeing the purchase of the organic seed produced. When a group of biodynamic farmers asked Rijk Zwaan if they could get organic Boa seed, Rijk Zwaan reached out to Green Organics, who is the main buyer of organic spinach seed for its growers.

Green Organics feels the responsibility to strive for a 100% organic supply chain and like Rijk Zwaan, they got a signal from some farmers that they wished to use organic seed.

***“If Rijk Zwaan wants to be a serious player in the organic sector, we must think in an organic way. This means we must offer organic seed. We also look at the new organic regulation which states that in 2035 every organic farmer within the EU has to use organic seed.”***

*Heleen Bos, Rijk Zwaan specialist marketing organics*

## 2.3. Incentives to use organic seed

In 2018 Green Organics and Rijk Zwaan signed an agreement in which Rijk Zwaan promised to produce enough organic seed for around 80 hectares of spinach yearly. Green Organics agreed to buy the seed for a price that is substantially higher than the one paid for non-organic spinach seed.

Thanks to this agreement, as of today 10-15% of the spinach seed bought by Green Organics is organic and the additional costs related to the premium price are spread among all spinach growers. In essence, Green Organics pre-financed

the organic seed for the farmers. Today all Green Organics spinach growers use the variety Boa, and the biodynamic farmers that initially expressed their desire for organic seed, now get organic Boa seed. In addition, according to the agreement with Rijk Zwaan, farmers get compensated with extra organic seed if the germination rate falls below a certain threshold.

This agreement between seed company and organic trading company has given biodynamic farmers the opportunity to use organic seed of the variety that is most demanded by the market, at a reasonable price. And because they are members of Green Organics, they do not have to worry about selling their product as organic.

***“Organic seed is going to become more important, therefore we want to have experience with it, before it becomes mandatory for all crops. Green Organics is the market leader for industry spinach. That gives us the responsibility to take steps forward.”***

*Jan Groen, Green Organics CEO*

## 2.4. Farmers' point of view

The organic spinach growers producing for the industry operate on large arable and horticultural farms, mainly based in the Dutch province of Flevoland. The four farmers that were interviewed in the framework of the LIVESEED project identified availability and quality as the key factors determining their use of organic seed. In the case of industry spinach, the farmers only use organic seed when it is available for the variety most demanded by the market. Spinach grower Henk Westers explained how important it was for him to have a completely organic chain. That's why he contacted Rijk Zwaan about organic Boa seed. He was aware that Rijk Zwaan needed more than just one farmer to start producing organic seed.

The farmers receiving organic spinach seed expressed more awareness about the importance of or-



ganic seed and were more likely to look for it themselves. However, also the farmers that contribute to the pre-financing of seed without receiving it themselves, supported this experience once they knew about it. Wouter Klaassebos is one of these organic spinach farmers: while he is not directly benefiting from the pilot, he thinks it is good that something is moving and is glad that he can contribute to this development: "It's good that all parties within the organic spinach sector are aiming for a 100% organic chain."

***"Availability is the most important factor. If organic seed is available and the quality is good enough, I will use it. It helps a lot that thanks to this experience we were able to buy organic seed on a larger scale, through Green Organics."***

*Martijn Schieman, spinach farmer*

## 2.5. Results, bottlenecks and success factors

The result of the pilot is that 10-15% of the Dutch organic spinach for the industry is now produced with organic seed, to the satisfaction of all partners involved.

For the seed company Rijk Zwaan, the commitment of Green Organics is very important. Heleen Bos from Rijk Zwaan states that in the past they experienced that some farmers asked for seed from a certain variety to be produced organically but once the seed company produced the requested organic seed, the farmers switched to a different variety. Commitment is key for seed companies as an incentive to invest in organic seed production. Green Organics was willing to make this contractual commitment. Transparency and personal contacts are also important factors for success. Rijk Zwaan visits all the spinach growers and reports that all farmers are positive and voiced no complaints about the seed received.

Green Organics discussed the possibility to use organic seed with spin-

ach growers and they accepted to be part of the agreement as long as the seed quality is good. The message with which Green Organics motivated growers to participate in this pilot is that by using organic seed, the grower is actively investing in the development of the sector, rather than losing margins. With farmers on board, Green Organics takes on the risk of producing spinach with a higher cost price. Security of supply towards the final customers is also an important factor which Green Organics discussed during the negotiations with Rijk Zwaan.

So far, the pilot has shown that organic production of spinach seed is possible and the quality is good, and these are important first steps. According to Green Organics, the pilot will be a complete success if a premium price could also be obtained for the final product obtained with organic seed.

An agreement like this requires a commitment from all actors of the supply chain. Initially, the non-collaborative attitude of the processing industry was a limiting factor in this case. Finally Jan Groen from Green Organics convinced Rijk Zwaan to start a pilot to test the quality of the seed.

The pilot has also raised an interest among other seed companies, who are exploring if a similar initiative may work for them as well. Rijk Zwaan sees this as a positive sign. Farmers are also positive about the idea of increasing the use of organic seed even if this means increasing the costs of production. Farmer Henk Wester said that "the infrastructure around organic production is managed so well in the Netherlands that even if spinach production becomes a bit more expensive because of organic seed use, it can still be competitive and buyers will not move their production to other countries".

***"The seed is being bought and there are no quality issues. So maybe in a few years it will become business as usual."*** Heleen Bos, Rijk Zwaan specialist marketing organics

## 2.6. Recommendations

The main lesson learned from this experience is the need to involve all actors in the supply chain and obtain a solid commitment from them, to incentivise the use of organic seed. The role of traders and the market demand can be important incentives in this sense. Jan Groen from Green Organics said that a lot of the industry crops are dominated by big multinationals who will follow, but not initiate. On the contrary, there is a need for companies who are willing, but also financially able, to take a risk. According to Green Organ-

ics, and also to the farmers, similar agreements could be made for other crops. New pilots with the same conditions would be interesting for other crops that are not on the National Annex and for which there is only one organic seed producer. According to Heleen Bos from Rijk Zwaan, in those cases a bilateral agreement is the way forward. But she also sees that it will remain a challenge to produce high quality organic seed in the required volumes, taking into account that agriculture increasingly has to deal with unpredictable weather conditions and climate change.





### 3. Organic seed from old cultivars for new markets in Hungary



#### 3.1. Introduction

Seed production is a significant sector of Hungarian agriculture and the national commercial seed market is well developed. However, organic seed production plays a minor role, as the domestic demand is relatively low. Especially for arable crops, organic farmers tend to use organic, farm-saved seed, which determines the lack of economic incentives for private seed companies to produce organic seed for the Hungarian market. Hence, there still is very little certified organic seed on the Hungarian market. Furthermore, there is little knowledge on commercially available varieties suitable for organic production conditions. The National Agricultural Institute's Centre for Agricultural Research (ATK) is one of the few institutions active in organic plant breeding. They breed organic einkorn and emmer varieties that are suitable for organic production.

According to the organic certifier Biokontroll Hungária Ltd., there are between 30 and 40 certified organic seed producers in Hungary. Farmers and research institutes are the main providers of organic seed. The farmers multiply the basic seed and subsequent cleaning is done by subcontractors. The organic seed produced in Hungary is almost 100% contract-based and most is exported to Western Europe (Austria, Germany, France, etc).

### 3.2. Initiators

ÖMKi is a non-profit research institute for organic farming based in Budapest, Hungary. Dr. Dóra Drexler leads the institute with 24 employees. Since 2012, ÖMKi has started an on-farm network with farmers on knowledge exchange and testing schemes to identify cultivars suitable for organic farming. Resulting from this knowledge exchange, it became clear that many organic farms are located on marginal climatic and soil conditions and that there was a need to find cultivars suitable for such low-input, extensive, arid production areas. In 2015, ÖMKi started small plot trials of emmer and einkorn landraces to find suitable cultivars. The pilot described here was launched in 2017, providing organic seed of ten emmer and five einkorn landraces and registered varieties to several organic farmers.

### 3.3. Incentives to use organic seed

The incentive introduced by ÖMKi was the development of pilots on organic farms, aimed at increasing local knowledge on suitable cultivars with an added-value for organic farmers, in order to foster the use of organic seed.

In the long term, the new cultivars will allow farmers to produce grains which can be sold in an organic supply chain and thus improve their income. Through providing the above cultivars to organic farmers, ÖMKi gains important knowledge on production, processing and marketing of the two species. Initially, genetic material of 15 different accessions came from Pro Specie Rara (Switzerland), the Hungarian National Centre for Biodiversity and Gene Conservation and the Agricultural Institute's Centre for Agricultural Research (ATK). Currently 8 organic farmers, each with 2-3 ha per farm, are involved in the pilot. ÖMKi organises field days to disseminate knowledge among stakeholders and facilitates the development of a

network of farmers, millers and bakers to share their experiences and needs and foster the creation of new organic products and value chains based on the two crops.

### 3.4. Farmers' point of view

The organic farms involved in the pilot are mostly medium sized, some with a mixed animal-plant production system and some relying on plant production only. The growing conditions are often very marginal, with poor sandy soils and an arid climate; farm management is most often extensive and low-input. The main species cultivated are arable crops such as cereals, mustard (used as green manure), alfalfa, soybean, sunflower, sweet clover and camelina. For the cereals, farm-saved seed is mainly used. For some varieties, organic seed is purchased on the market, while for many others non-organic untreated seed is used, since the assortment of organic certified seed listed in the seed database and available on the market is very limited. Sometimes organic certified seed is provided by a trader for which organic products are grown under contract.

***"The request from the buyer is very important for my variety choice, but I try to cultivate Hungarian varieties when possible, assuming they are more adapted to the local agro-climatic conditions." Mihály Földi, farmer***

Farmers participate in the pilot on a voluntary basis. As their farms are located in extensive regions with poor soils, they are constantly looking for alternative crops, production methods and new marketing channels. The pilot gives the farmers the opportunity to try out new varieties which are normally not available to them. During the pilot, farmers receive the seed for free, however they are confident that if the cultivars are good and they can market the product, they will continue using organic seed even if they will have to pay for it themselves.



According to farmer László Gál, a 25-30% higher price for organic seed, depending on many factors such as the value of the variety and the market demand, would be acceptable. Besides that, hulled cereals like emmer and einkorn are very robust, meaning there is no need to buy new seed each year, as farm-saved seed is comparable in terms of quality to purchased certified organic seed. This results in farmers not having to purchase all of their emmer and einkorn seed requirements each year, allowing them to reduce production costs (providing the varieties are not protected).

### 3.5. Results, bottlenecks and success factors

The pilot shows that emmer and einkorn landraces can be suitable for low-input production areas in Hungary. However, processing of the final product remains a bottleneck, especially cleaning and dehulling the grain, which requires specialised equipment often lacking on the farms. With processing facilities lacking, these crops can still be used as feed for animals but thanks to their high protein content, low glycaemic index and high total dietary fiber content, emmer and einkorn hold great potential for human consumption and for market development in this sense.

Furthermore, farmers lack time and facilities to secure a separate harvest and accurate cleaning of individual plots if they grow more than one landrace for the pilot trials. Therefore, ÖMKi provides support to

farmers in setting up the trials, in assessing disease and pest infections in the field as well as quality parameters in the laboratory. To upscale the pilot, it is important to organise further organic seed multiplication schemes, to secure delivery of high quality organic seed for plot trials and interested farmers.

### 3.6. Recommendations

Farmers are often motivated to participate in a new pilot, to develop solutions for their current problems. In the case of Hungary, ÖMKi is working with farmers who have to deal with marginal production environments. Global climate change might worsen this situation, in which case more and more farmers would need to find suitable cultivars, which at the same time create an added value to secure a better income. The experience from the pilot illustrates that organic seed from commercially available cultivars doesn't always create the desired added value and thus doesn't provide the economic incentive needed to purchase organic certified seed. Finding landraces, organic heterogeneous material or organically bred cultivars that are more suitable for the prevalent conditions, can instead create this value and motivate farmers to test new cultivars and use organic seed.

***“More information about the varieties and a greater offer of organic seed on the domestic market would be a big motivation to use more organic seed.”***  
Mihály Földi, farmer



## 4. Organic seed production, cleaning and use in the Tulcea region in Romania

### 4.1. Introduction

More than 70% of the organic land area in Romania is cultivated with arable crops. The seed companies that sell organic seed on the Romanian market are predominantly international companies.

Farmers are the main producers of organic and conventional seed in Romania. There are over 100 organic farmers officially registered as seed producers, and organic farmers produce their own seed on-farm. To be authorised as a seed producer, a farmer must be aware of the seed regulation in force and pass an exam with the local seed authorities. Once a farmer is registered as a licenced seed producer, his/her field is inspected, seed quality is tested and finally, seed is certified.



### 4.2. Initiators

Eco Product Mahmudia is a cooperative of 11 large-scale organic arable farmers in the Tulcea region. The cooperative provides its members with all the necessary organic inputs, in-

cluding seed, and buys most of their end products. The cooperative sells these products on the international market.

Alexandru Petrescu is one of the founders of this cooperative and a trader in organic cereals and seed. In



2016, the cooperative started to motivate its members to use organic seed. Some members of the cooperative are already licenced as organic seed producers. To improve the quality of the seed they produce, the cooperative purchased a modern seed processing plant.

***“Using organic seed brings organic farming one step closer to the organic agricultural philosophy. My aim is to make the cooperative self-sufficient in organic seed.”*** Alexandru Petrescu, Eco product Mahmudia

### 4.3. Incentives to use organic seed

This pilot is about increasing the production and use, and improving the quality of organic seed within the cooperative. The 11 members of the cooperative have different motivations to use organic seed. First of all, they all receive a discount for the organic seed provided by licenced seed producing farmers within the cooperative. Another advantage is the fact that the seed is produced every year in the same area and therefore the cultivars become increasingly adapted to the local growing conditions. For crops that are produced with the use of organic seed, farmers also receive a higher price from the cooperative. Some members of the cooperative have experienced that the use of non-organic seed can lead to serious problems with their organic certifier in case chemical residues are found on this seed. Therefore, by using organic seed, farmers avoid the risk of contamination.

The cooperative members produce organic seed from wheat, barley, flaxseed, sunflower and pea.

The basic seed for wheat and barley comes from the National Agricultural Research and Development Institute (NARDI) in Fundulea. That seed is organic. The basic seed for the other crops comes from different national and international non-organic seed companies.

### 4.4. Farmers' point of view

The members of the cooperative operate on large-scale (around 400 hectare) arable farms and grow field crops like winter wheat, sunflower and peas. The varieties they use are mainly determined by the requests coming from the buyers of their products. Other key factors determining which type of seed farmers use are related to the agronomic and qualitative characteristics of the varieties, as well as the price of the seed.

***“The cooperative supplies seed from better varieties and of the highest quality standard.”***  
Nicolae Iorga, farmer

Following this reasoning, the farmers of the cooperative use farm-saved seed or buy seed (both non-organic and organic). The cooperative motivates farmers to use more organic seed by improving the quality of the seed produced by the cooperative members.

Farmers say they would use even more organic seed if they received a subsidy for it. However, seed quality and adaptation to the local growing conditions are also very important, together with the capacity to provide consistent and stable yields.

***“We buy certified organic seed from the cooperative because they offer the best varieties for our region and for a lower price.”***  
Gheorghe Gheorghe, farmer

### 4.5. Results, bottlenecks and success factors

Aleandru Petrescu estimates that the cooperative produces around 2000 tons of organic seed on a yearly basis. The cooperative introduced a competitive price for the organic seed produced by its members and due to this and to the improved quality, the request for organic seed from its members is growing. Farmers' confidence in the seed produced by

the cooperative has also increased. One of the success factors observed by LIVESEED in this Romanian pilot is the close collaboration between cooperative members and the research institute NARDI. Most farmers are long time authorized seed producers and have undergone training at this research institute, which has allowed them to acquire the skills needed to become good producers of organic seed. Still, producing good quality organic seed is a challenge for them. It implies great professionalism and is highly dependent on climate and environmental conditions when it comes to problems in the field with

diseases and pests.

According to Petrescu, the main bottlenecks to increase the use of organic seed in Romania are at a financial level. Besides that, the rules for using organic seed should be stricter.

#### 4.6. Recommendations

The production of organic seed requires specific skills and a coherent network of collaborating actors in place. Alexandru Petrescu recommends seeking advice from people that already have experience in this field. In practice this is already happening: they have been contacted by another organic farmers' cooperative (Organic Green Cooperativa Agricola/Negrasi - Arges), which aims at becoming self-sufficient in their organic seed production and wants to learn from the the research institute NARDI and the Tulcea farmers.

***“We believe that certified organic seed producers need more financial help from the authorities. Another bottleneck we see is that the choice between certified organic seed and conventional untreated seed is now arbitrary.” Alexandru Petrescu, Eco product Mahmudia***









# Creating incentives for farmers to use organic seed



## BOOSTING ORGANIC SEED AND PLANT BREEDING ACROSS EUROPE

**Duration: 4 years (2017 – 2021)**  
**Project coordinator: IFOAM OE**  
**Scientific coordinator: FiBL-CH**



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